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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,993	09/28/2005	Jean-Claude Braekman	DECL106.001APC	9456
20995 7590 05/28/2009 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER CLARK, SARA E	
			ART UNIT 1612	PAPER NUMBER
			NOTIFICATION DATE 05/28/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/538,993	Applicant(s) BRAEKMAN ET AL.	
	Examiner SARA E. CLARK	Art Unit 1612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6-9, 11, 13, 15, 20 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 10, 12, 14, 18, and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

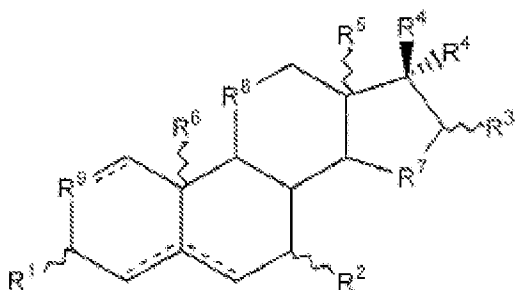
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|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/15/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

This application is a 35 U.S.C. 371 (national stage) application of PCT/EP03/14567, filed 12/18/2003, which claims benefit of priority to EPO application 02447257.3, filed 12/18/2002, and provisional application 60/435,834, filed 12/20/2002. Claims 1-15, 18, and 20-22, as amended, are pending.

Election/Restrictions

1. Applicant's election with traverse of Group I (claims 1-10, 12-15, 18, and 21) in the reply filed on 4/22/2009 is acknowledged. The traversal is on the ground(s) that in the requirement for restriction dated 2/27/2009, the Examiner erred in identifying Formula (IV) as the shared technical feature linking Groups I-III, because it does not fall within the scope of Formula (IB) as recited in claims 1 and 11, which is the shared technical feature linking Groups I-III. While upon reconsideration the Examiner agrees that Formula (IB) is the shared technical feature of Groups I-III, this is not found persuasive because species falling within Formula (IB) are known. For example, Ahlem et al. (WO00/56757, published 9/28/2000) disclose compounds having the generic formula



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in which

- C₁-C₂ and C₄-C₅ are single bonds and C₅-C₆ is a double bond,
- R¹ is -O-β-D-cellobiosyl,
- R² is hydrogen,
- R³ is a substituted aryl group, including p-dimethoxybenzene,
- R⁴ is hydrogen or -C(O)CH₃,
- R⁵ and R⁶ are methyl, and
- R⁷, R⁸, and R⁹ are methylene (-CH₂-)

(see p. 5, lines 7-21; p. 15, lines 15-25 for the definition of substituted aryl group; and p. 15, lines 4-14 and p. 16, lines 1-5 for the definition of mono- and oligosaccharides, which includes the disaccharide glucose-(β1→4)-glucose, a.k.a. cellobioside). This yields the species UBS3327 as recited by claim 14, which falls within the scope of Formula (IB), such that it is not a special technical feature within the meaning of PCT Rule 13.2. See MPEP §§ 1850 and 1893.

The requirement is still deemed proper and is therefore made FINAL.

2. With regard to the species election corresponding to compound UBS3327 as recited in claim 14, Applicant states that

- n is 0
- X₁ and X₂ are each -OMe
- R₁ and R₂ are each -H
- X₃ and X₃' participate in an oxo (C=O) group
- X₄ and X₆ are each -H

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- X_7 is cellobiosyl,

with which Examiner concurs. However, Applicant states that X_5 participates in a double bond between positions C_4 and C_5 , which does not correspond to UBS3327, in which X_5 participates in a double bond between positions C_5 and C_6 . The Examiner interprets the structure of the compound UBS3327 as recited in claim 14 to control as the elected species. Further, Applicant asserts that claims 1-10, 12, 14, 18, and 21 read on this species. However, Examiner disagrees and finds that the elected species UBS3327 reads on claims 1-3, 5, 10, 12, 14, 18, and 21, but not claims 4 and 6-9, for the following reasons:

- Claims 4 and 6 recite that X_5 participates in a double bond between positions C_4 and C_5 , which does not correspond to UBS3327, in which X_5 participates in a double bond between positions C_5 and C_6 .
- Claim 7 recites that X_3 is hydrogen, hydroxyl, oxyalkyl, or oxycarbonyl, and X_3' is a sugar moiety, which does not correspond to UBS3327, in which X_3 and X_3' participate in an oxo ($C=O$) group.
- Claim 8 recites that X_3 is a sugar moiety, and X_3' is hydrogen, alkyl, or aralkyl, which does not correspond to UBS3327, in which X_3 and X_3' participate in an oxo ($C=O$) group.
- Claim 9 recites that X_4 is hydroxyl or a sugar moiety, and X_7 is hydrogen, oxygen, hydroxyl, or oxo, which does not correspond to UBS3327, in which X_4 is hydrogen and X_7 is the sugar moiety cellobiosyl.

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3. Claims 11, 20, and 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, and claims 4, 6-9, 13, and 15 are withdrawn as being drawn to nonelected species, there being no allowable generic or linking claim. Claims 12 and 21 depend from withdrawn claim 11, drawn to a method of making compounds of Formula (IB); however, claims 12 and 21 are drawn to a compound and a composition containing a compound, respectively, falling within the scope of the compounds of claim 1. As set out in the requirement for restriction dated 2/27/2009, claims 12 and 21 are included with the compound claims 1, 2, 3, 5, 10, and 14, and have been examined to the extent that they encompass compounds of Formula (IB). Therefore, claims 1, 2, 3, 5, 10, 12, 14, 18, and 21 are the examined claims. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/22/2009.

Priority

4. Acknowledgment is made of applicant's claim to foreign priority under 35 U.S.C. 119(a)-(d).
5. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.
6. The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the

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requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/435,834 fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application, specifically, the elected species UBS3327 as recited by claim 14. However, the disclosure of provisional application 60/435,834 supports claims 1, 2, 3, 5, 10, 12, 18, and 21, which are thus entitled to an effective filing date of 12/20/2002, while claim 14 has an effective filing date of 12/18/2003.

Information Disclosure Statement

7. The information disclosure statement (IDS) submitted on 6/15/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 10 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 improperly incorporates by reference a twenty-two page table set out in

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the specification (Table B, pp. 40-62). Where possible, claims are to be complete in themselves. Incorporation by reference to a specific figure or table "is permitted only in exceptional circumstances where there is no practical way to define the invention in words and where it is more concise to incorporate by reference than duplicating a drawing or table into the claim. Incorporation by reference is a necessity doctrine, not for applicant's convenience." *Ex parte Fressola*, 27 USPQ2d 1608, 1609 (Bd. Pat. App. & Inter. 1993) (citations omitted). See MPEP §2173.05(s).

Claim 14 is missing a point at the end and, thus, is indefinite.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

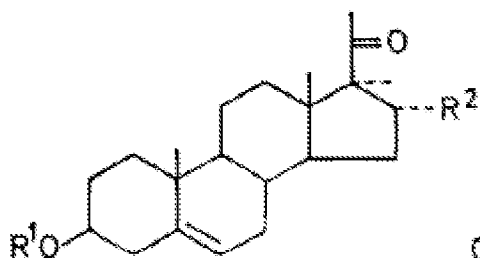
11. Claims 1, 2, 3, 5, 10, 12, 14, 18, and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Cairns et al. (J. Chem. Soc., Perkins Trans. 1 (14), 1558-64, 1976), in view of Ahlem et al. (WO00/56757, published 9/28/2000).

Cairns et al. disclose compounds falling within the scope of formula (IB), for example, wherein

- n is 0
- X₁ and X₂, R₁ and R₂, X₄ and X₆ are each hydrogen
- X₃ and X₃' participate in an oxo (C=O) group

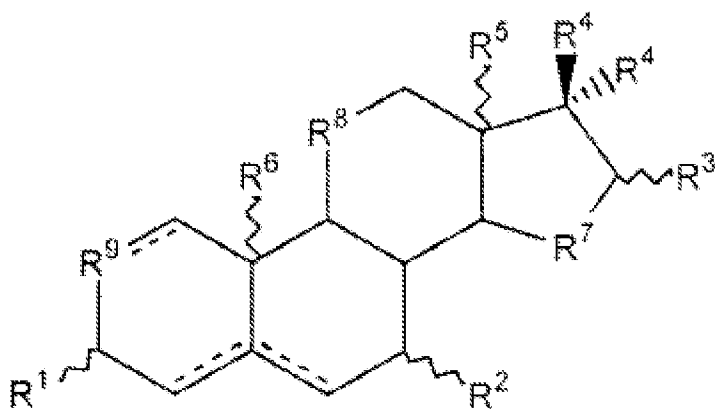
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- X_5 participates in a double bond between positions C_5 and C_6 , and
- X_7 is $-OAc$.

(14) $R^1 = Ac, R^2 = Et$ (15) $R^1 = H, R^2 = Et$ (16) $R^1 = H, R^2 = Pr^n$ (17) $R^1 = Ac, R^2 = Pr^i$ (18) $R^1 = Ac, R^2 = Bu^i$ (19) $R^1 = H, R^2 = Ph$ (20) $R^1 = Ac, R^2 = Ph$

(Cairns et al., compound 20, p. 1561). However, the compounds of Cairns et al. have a 17α -methyl group, which the claimed compounds lack.

Ahlem et al. teach compounds encompassing those taught by Cairns et al., having the generic formula



in which

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- C₁-C₂ and C₄-C₅ are single bonds and C₅-C₆ is a double bond,
- R¹ is -O-β-D-cellobiosyl,
- R² is hydrogen,
- R³ is a substituted aryl group, including p-dimethoxybenzene,
- R⁴ is hydrogen or -C(O)CH₃,
- R⁵ and R⁶ are methyl, and
- R⁷, R⁸, and R⁹ are methylene (-CH₂-)

(see p. 5, lines 7-21; p. 15, lines 15-25 for the definition of substituted aryl group; and p. 15, lines 4-14 and p. 16, lines 1-5 for the definition of mono- and oligosaccharides, which includes the disaccharide glucose-(β1→4)-glucose, a.k.a. cellobioside). This yields the species UBS3327 as recited by claim 14, and therefore by claim 10 (see Table B, specification p. 45, line 2) and genus claims 1, 2, 3, 5, 12, 18, and 21.

Moreover, Ahlem et al. teach that the 17α-R⁴ and the 17β-R⁴ are independently chosen from a wide variety of functional groups, which can include alkyl groups such as the 17α-methyl taught by Cairns, which can also be absent (i.e., hydrogen). In other words, Ahlem et al. teach compounds having C₁₇ substituted only by -Ac, or by both -Ac and methyl, without impacting the molecule's function.

Further, the compounds of Ahlem et al. are taught in pharmaceutical formulations in combination with one or more pharmaceutically acceptable excipients, such as ethanol or propylene glycol (p. 8, line 7 to p. 9, line 2), as recited in claims 18 and 21.

In summary, Cairns et al. discloses a compound falling within the scope of Formula (IB) with the exception of having a 17α-methyl group, while Ahlem et al.

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teaches compounds with or without a 17 α -methyl group having therapeutic effects in vivo either way, in addition to having 16-p-dimethoxyphenyl and 3-O- β -D-cellobiosyl groups, corresponding to the elected species UBS3327.

Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine compound 20 of Cairns et al. with the modifications at positions 3, 16, and 17 as taught by Ahlem et al. to arrive at the elected compound UBS3327 with a reasonable expectation of success, because compounds of Formula (IB) were known in pharmaceutical compositions in combination with an excipient to have therapeutic effects when administered *in vivo*.

Double Patenting

12. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

13. Claim 14 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 21 of copending Application No. 10/582,121. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

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14.

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. Claims 1, 2, 3, 5, 10, 12, 18, and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 4, 5, 6, 8, 10, 13, and 37 of copending Application No. 10/582,121. Although the conflicting claims are not identical, they are not patentably distinct from each other because reference claims 4, 5, 6, 8, and 10 claim a genus of compounds (a) coextensive with the scope of examined claims 1, 2, 3, and 5 as to X_3 , X_3' , X_4 , X_5 , X_6 , X_7 , and (b) falling within the scope of the compounds of Formula (IB) of examined claims 1, 2, 3, and 5 as to X_1 , X_2 , R_1 , R_2 , and n . Reference claim 13 claims a genus of compounds substantially overlapping that of examined claims 10 and 12; and reference claim 37, drawn to a pharmaceutical composition comprising an excipient and a compound of reference

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claim 4, overlaps the scope of examined claims 18 and 21, drawn to a pharmaceutical composition comprising an excipient and a compound of examined claim 1.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

16. Claims 1, 2, 3, 5, 10, 12, 14, 18, and 21 are rejected.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARA E. CLARK whose telephone number is (571) 270-7672. The examiner can normally be reached on Mon - Thu, 7:30 am - 5:00 pm (EST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass, can be reached on 571-272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/SARA E. CLARK/
Examiner, Art Unit 1612

/Frederick Krass/
Supervisory Patent Examiner, Art Unit 1612